

BLM Fire and Aviation

International Wildland Fire Exchange Program Report

Norway

June 2000

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Preface

Wildland fire management international exchanges have been conducted since 1997, originating from the high degree of interest shown by foreign nations in the BLM fire and aviation program at the National Interagency Fire Center.

Norway has been a participant in this program since its inception, and maintains a high level of interest in continuing exchanges to learn about the BLM organization and procedures, as well as to share their projects and operations with the BLM.

As a continuing part of the program, Dave Vickery of BLM's Office of Fire and Aviation in Boise, Idaho visited Norway in June 2000. The host agency was the Directorate for Fire and Explosion Prevention (DBE) which is under the Ministry of Local Government and Regional Development within the national government of Norway. Additional hosts in the country were the fire organizations in the Municipality of Skien in Telemark County, and Gjøvik in Oppland County.

The purpose of the exchange was to provide to BLM an initial review of the municipal fire operations in the two regions most affected by wildland fire. In contrast with the United States, responding to wildland fire is the responsibility of Norway's municipal fire organizations. In addition, BLM was given the opportunity to meet with and discuss wildland fire with municipal planners, County Governors, civil defense officers, national mapping officials, and national technical leaders for a new radio system. The exchange also included meetings with university researchers, the head of Skogbrand (a private national insurance company for timber and forest lands), as well as with the top leadership of DBE.

County government in Norway is comparable to the state government level in the United States. There are 18 county governors appointed by the Norwegian king, and each is responsible for administration of the national laws in the county. Municipal governments have significant latitude in governing, but must operate under national laws. DBE, the host agency, is the central government authority in the field of onshore fires (including wildland fire) and explosion prevention in Norway.

All of the people of Norway who had any part in hosting this visit put forth the utmost in kind hospitality and friendship. Without exception, they provided a most cordial reception at each part of the exchange trip. All were outgoing in conveying information and during discussions. All expressed a keen interest in BLM and the United States wildland fire program.





The American Flag flew at the Skien, Norway municipal fire department during the exchange program.

June 14, 2000

I arrived in Oslo, Norway after an overnight flight from Newark, NJ. Even Skredsvig of DBE met me, and we drove about three hours to the municipality of Skien in Telemark. During the drive, we discussed the exchange program, with particular attention to the possibility of opening up technical exchanges for issues such as satellite imaging, GIS, and communication.

At Skien, I met with Fire Chief Guttorm Liebe and Hedmark County Officer Kaare Kveset, who had visited BLM and NIFC in 1998. We discussed my visit and talked about how this exchange program can benefit to both the BLM and Norway. Kaare especially is interested from the County standpoint to continue looking at the Incident Command System (ICS) system in the United States and where it can be adapted in Norway.



Forests and fjords encompass the Norwegian landscape.

In early afternoon, Guttorm and I went to the Skien municipal offices where we met with city planners from four municipalities in the Grenland (lower Telemark County) region. They provided briefings on use of GIS as a part of their work for the various communities, and where that fit with the fire response agencies. One of the essential aspects to the local communities



was through a national GIS data system that is provided to all local agencies twice each year from their national level offices. This data system included all updated road information, home owner information, precise location, special cultural sites (such as old wooden churches) that need special protection, and a variety of other information. The on-the-ground usefulness of this system was immediately apparent. I provided a briefing on BLM fire, and gave them a cursory overview of our GIS status. They were very interested in learning how our GIS system works, and in being able to review our system, especially the aspect of including topographical information into the software.



Fire dispatch central at the Skien station.

Following the meeting, we returned to the fire station, and took a walking tour and I met most of the fire crew on duty. Following an early evening meal, I gave a presentation on BLM Fire and Aviation and wildland fire. There were many questions about BLM fire operations and how our employees perform their duties and uphold their responsibilities. The crewmembers showed great interest in the satellite photo of the Los Alamos, NM fire, and in the problem posed by wildland-urban interface.

June 15

County fire officers throughout Telemark County came to the Skien station to hear about BLM fire issues and learn about the exchange program. I provided an extensive presentation along with information about BLM management in the western United States. Guttorm gave the group background on the ICS system and a short recap of his visit to America in 1999. The group was interested in the program, and wanted to learn more about the BLM and ICS.



Telemark County fire officers meeting.

Following lunch, we boarded a DBE helicopter and took a short air tour of the Skien area. This aircraft is under contract each year, and is the only contract helicopter available to the fire department for wildland fires. Norway uses the helicopter with a bucket to support their suppression work. The pilot and crew are well trained, and their safety procedures are equivalent to those in the United States. Helicopters are not used to transport Norwegian fire crews since nearly all of their wildland fires are accessible by road.





Wildland fire helicopter under contract to DBE.

In the evening, I accompanied members of the fire crew to a rocky area near the station and watched them get re-certified with rappelling equipment. Fire crewmembers need this training because they are required to assist with rescue operations as necessary. They are also trained in structural and wildland fire suppression. Crewmembers are required to maintain a high level of physical fitness in order to meet the demands of their profession. Most of the fire crewmembers in Norway remain at one location for nearly their entire professional career. They can move into jobs with more responsibility at their duty station. These crewmembers often develop life-long ties to their co-workers and the local community.

June 16

Cultural attractions in the immediate Skien area were the primary focus of the morning events. Guttorm Liebe provided a tour of an old cloister circa 900 A.D., then a trip to the museum showing how Norwegians lived about 1700 A.D. We also visited the farm where the famous playwright Henrik Ibsen lived as a young man and looked at the system of boat locks that provide a marine transportation system used for industry, recreation and tourism.

Before lunch, we met with the deputy governor for Telemark, and I provided a briefing on BLM and wildland fire. We had a discussion regarding their work, and they gave a presentation on the risk management and civil defense aspects of county government. Civil defense in Norway plays a much larger role in disaster



Skien fire truck and entrance to civil defense emergency operations center.

preparedness and response than in the United States. Their primary role is to respond to natural disasters, and they must work closely with local fire officers and municipalities in carrying out their duties. We went to one of the fallout facilities that originally had been prepared during the cold war. The center was built inside a large cave in the granite, and was suitable for self-sufficient living for about 40 people on an indefinite basis. The center was accessed through a blast door designed to resist nuclear explosion, and had self-contained systems for water, air filtration, sewer, communication, sleeping quarters, kitchen, electrical plant, and other elements to support a government operation. While the threat of war has been reduced, Norway maintains this type of system in the event that a major disaster disrupts the ability of government to function normally. The facility was very impressive, and BLM could learn from the system of civil defense planning in Telemark.



In the evening, I had dinner in the home of Guttorm and his wife, Lisbeth. We had a long discussion about the exchange program and where it could go in the future. Guttorm is anxious to send county fire officers to the United States to be assigned to BLM ICS teams, and have them work in different regions of the western states if possible. He would like to have two or three people come over next year. He is interested in sharing information about the ICS system with other European nations, and planning to share his work with BLM at a European Fire Officers meeting in Germany the week of June 19. He works closely with fire organizations and officials throughout Europe on a routine basis. He was also very interested in maintaining executive level contact between BLM and



Telemark County emergency officer Ove Stokkeland at civil defense operations shelter.



Inside the emergency shelter.

Norway. He suggested that for next year, part of the exchange program include top leadership of BLM Fire and Aviation to Norway, with top DBE leaders to the United States. Guttorm indicated that he and others can serve as catalysts for future exchange and learning with other European nations, and are willing to work with us to open doors.

We discussed the potential for two or three American mid-level managers to come to Norway next year and train with different fire stations. One suggestion to enhance their experience would be to have them visit several duty stations during the trip. This would give them an opportunity to respond to different types of calls and to do some training with their Norwegian counterparts.



Skien Fire Chief Guttorm Liebe

We also discussed the potential for BLM people to work with some of the national level GIS activities in Norway and possibly tie this to work that is being done in universities. BLM exchange candidates should have good working background in how GIS is used in our management, preferably at the operational level.

June 17

I traveled by car to a small airport northwest of Skien, then met Geir Pladsen, fire operations chief at the Gjøvik station and the pilot of our small aircraft. We flew across the southern part of Norway to Gjøvik, viewing the mountains and forests. The aircraft was from the flying club, and is used on a volunteer basis to assist in fire monitoring during the active season. The agreement allows DBE to assist with fuel and operation costs, and local member pilots donate their time on a scheduled basis to monitor for wildfires.

In Gjøvik, Geir and I met with the local municipal fire chief to discuss the exchange program and work for the next few days. He is supportive of the exchanges, and believes this can be useful to fire organizations in both countries.



Geir and I visited the local civil defense headquarters site and examined the portable quick-change water tank system that they are adapting for wildland fire use. This system, taken from their military, has a large capacity water tank that is transported by truck and can be dropped off on-site. The truck can exchange tanks as necessary to maintain water at a fire site.



Local flying club at Gjøvik. Aircraft used for wildland fire detection.



Quick attach tank system to provide water to wildland fires. Adapted from the Norwegian military.

June 18

The local fire department was providing demonstrations in the community, and we participated in the activities. Fire department members are active in community events, and are popular with people in the area. We observed a parachuting group from Hamar, located across the lake from Gjøvik in Oppland County as they made demonstration jumps for the crowd. Kaare Kvesset was a member of this group, and following the jump, we meet briefly to discuss the exchange visit.

During the afternoon, I participated with the local flying club as we conducted a wildfire monitoring flight to the north. This included overflights of some previously burned areas which permitted a view of how the local firefighters had gained access to the fire. Coming back to the airport, we flew over the Lillehammer area, and observed a major structure fire that had broken out at a canteen on a military base.



Norwegian wildland fire detected by local air club (Terje Traaholt, photographer).



June 19

Geir drove me to Hønefoss where we met Even Skredsvig. Geir departed for home and Even and I visited the Norwegian Mapping Authority, Land Mapping Division for a meeting with

Sven Saga, the deputy director. He gave a presentation about the mapping program for Norway, and provided a tour of the operational divisions of the agency. The work of the mapping program is very high quality. All map bases are being digitized, which supports the work of the wildland fire program in the country. There is a close connection with the GIS work through this agency and may be a good opportunity to include the mapping issue in the exchange program. I briefed the group on the BLM fire program and operations.

Following a lunch, Even and I drove to meet with Per Aas, director of Skogbrand, and with Ivan Mystrud from the University of Oslo. We had a working dinner, and discussed several topics, including the exchange program, research projects, and Norway's fire response.



National government offices complex, Oslo, Norway.



Reconstructed fortifications, Oslo harbor.

June 20

Even and I met with Tor Lyngstøl, Project Coordinator for the TETRA project. This is a new national digital trunked radio system that will be implemented in Norway. The oversight for the project is through the Norway Ministry of Justice, and it is coordinated through DBE and other agencies to ensure that all emergency, rescue and fire organizations will be able to implement it. The system will undergo a test in the Trondheim region this fall. We discussed their system, and I provided a short overview of the narrow band issue the BLM now faces. Following lunch, I provided a briefing of BLM's wildland fire program and our operations.

During the afternoon, we met again with Mysterud and Per Aas at the Skogbrand headquarters. I gave an in-depth presentation on the BLM and United States wildland fire program, then Professor Myserud gave a lengthy presentation on the fire history of Norway. Much of the information regarding fire history there was from



(Left to right) Even Skredsvig-DBE, Dr. Ivar Mysterud- University of Oslo, Per Sindre Aas- Director, Skogbrand.



human impact, which would likely be in contrast to non-human causes should a study be completed on BLM lands. We discussed the fire history project and its potential application to BLM fire and management. The English language version of this study will be available this October, and the Norwegians will send us copies. There appears to be solid basis for BLM specialists to be part of the exchange program and work with the Norwegian researchers in Norway to examine how this study was done and interpret the results. Having some fire history of this nature on BLM lands might provide some basis for determining the best use of prescribed fire in some areas.

Dr. Mysterud discussed the recent study showing the impact to United States cities from Canadian wildland fires. He indicated that having a BLM scientist assist in setting up a similar study for Scandinavia could be a possible part of the exchange program.

Even indicated that perhaps Norwegian delegates looking at the Frostfire research and site in Alaska could be of some interest, since it was done in the boreal region similar to Norway landforms.

June 21

Even and I drove to Tønsberg, where the DBE national headquarters are located. We met with Tor Suhrke, the Director General of DBE, where I provided a briefing about BLM and our fire program. We discussed the exchange program and potential for future cooperation. Mr. Suhrke was supportive of the program, and would like to see it continue. We met also with Nils Bryde, who serves as assistant to Even, and will likely take over his post when Even retires within the next few years.

Even and I held several hours of discussion about the program. It was clear that all elements of the DBE, municipal fire departments, Norway civil defense, and others are interested in continuing this exchange system, and would like to ensure it provides the highest benefit to both the BLM and Norway. Even is willing to help open doors to other agencies throughout Europe if BLM is interested. We discussed the potential for additional exposure of BLM specialists to areas such as civil defense, radio systems, GIS issues, and research topics. Norway wants to have more hands-on experience in ICS and they want their operational people to work with us. Even is particularly interested in maintaining an executive level relationship with BLM, and feels that having the BLM Fire

and Aviation Director visiting Norway next year would be very important.

At this point, the next step will be for BLM to develop a letter to Even proposing a program for the next year. I told him we would get it developed as soon as practical after I had returned, and had briefed our leadership.

June 22

Even and I visited one of their main national parks to view the very old Viking mounds. We then went to a famous site in Tønsberg where a significant part of Norway history took place and where kings are crowned.

I departed by train for Oslo.

June 23

I departed Norway and returned to the United States.



Castle fortifications, Tønsberg, Norway. Kings of Norway are crowned here.



Viking burial mounds, Norway national park.

Conclusion

This exchange visit was an excellent program that served to strengthen the ties between the national and regional levels of the Norwegian wildland fire organizations and BLM Fire & Aviation. It opened the door for additional topics that will serve both BLM and Norway fire organizations in the job of managing wildland fire and land management. It is clear that with the advent of new technology in communications and more open borders throughout the world, wildland fire agencies have new opportunities to learn from each other. The organizations in Norway and the BLM are struggling with, and developing many of the same kinds of programs. These include GIS applied to wildland fire, implementation of new radio systems, looking at use of satellite technology, and training and experience in dealing with wildland fires. It is incumbent on BLM to use this type of international program to look beyond its boundaries, and to be able to learn from and about the work being done in Norway and other countries. It is my firm recommendation that this program with Norway be continued and expanded where possible and logical.

Special thanks are due to the Norwegian hosts while I was in their country. Without exception, they were gracious, helpful, and willing to open their personal homes in support of the program, and in an effort to make my visit as enjoyable and educational as possible.

July 2000
Boise, Idaho

